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Original Communications.

CAUSES AND TREATMENT OF STRABISMUS.

[Read before the Semi-annual Meeting of the Bristol County Medical Society.]

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MR. PRESIDENT AND GENTLEMEN,—The subject which I have chosen for my essay is, strabismus, its causes and treatment. The subject has always been especially interesting to myself, and as operation for strabismus was formerly, and still is occasionally, performed by general practitioners, I thought it might prove of interest to you also, and I have endeavored to condense some of the most noteworthy points from an extensive literature into a brief space.

When looking at any object with both eyes, we see this object single, if the images formed on the retina of each eye cover corresponding or identical parts. If this is not the case, we see the object double. Every one of us, who has been in the habit of seeing with both eyes, can cause immediately the appearance of double images by applying, for instance, the forefinger to the under eyelid, and making a very gentle pressure between the margin of the orbit and the eyeball. The latter is thereby displaced a trifle upward. If we look now, for instance, at the light of a candle, we immediately see two images—one belonging to the right eye, the other to the left. If one of the muscles of the eye is paralyzed, the eye deviates in the direction of the antagonistic muscle, and we constantly find the symptoms of double sight, especially when the object lies at the side of the affected eye. If the left rectus externus is paralyzed, the patient sees all objects at the left side double. The diplopia, however, does not appear at once. The first symptom is indistinct vision, because the images of outside objects cover each other partly, while at the same time a feeling of dizziness and unsteady walk is observed. Gradually its character of diplopia becomes more and more distinct, and it covers a wider range. At first it only appears at the affected side, but after some time it also appears when looking straight forward, and, especially after long duration, even when the object lies at the opposite side.

In strabismus we have something different. There is also deviation of one eye to the inside or outside (rarely upward or down-

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ward) of the object, which is seen by the other eye. But, in general, the patient does *not* see double, although the impression of the object is made on the retina of both eyes. The deviation is here produced by excessive contraction and consequent shortening of one of the muscles, and, in almost every case, it is accompanied by loss of the power of sight. Especially in the beginning, the deviating eye is not blind, but it pays no attention to the object observed by the other eye; for reasons which will be made more distinct presently, it suppresses the image of the object formed on its retina. This is, as Donders observes, one of the examples how readily we may abstract ourselves mentally from any idea, or from any impression, if we want to do so. The watchmaker and engraver, when employing a simple magnifying glass, use only one eye, yet they do not close the other. When we work with the microscope or ophthalmoscope, we do the same. And we all know how, in the sound, we find something identical in the application of the stethoscope, where the experienced ear hears only the sounds proceeding from lungs, heart or arteries, and completely suppresses any other sound that might arise.

Another difference between strabismus and paralysis is, that the affected eye follows the movements of the other eye. At the commencement of the disease it can even be brought to look straight at the object, and it will observe this after the other eye has been covered. This is completely, or almost completely, impossible in paralysis of one of the muscles.

We mentioned that with the deviation there also occurs loss of power of sight. This depression of sight is developed gradually. If squinting has existed only a short time, we may cover the well-directed eye with the hand, and we see that the deviating eye is fixed upon the object; and often, when the hand is removed, it remains in that direction, both eyes looking straight at the object, but the least motion, as, for instance, winking of the eyelids, is enough to re-produce the deformity. If, now, we compare both eyes in respect to this power of sight, we find a marked difference; but the loss of sight is not yet so much that it may not be wholly or partly restored to its full power after the cause has been removed. But if not, it goes on decreasing gradually, till the eye is almost blind, at least for direct observation, and with this loss of power, decreases at the same time the possibility of directing both eyes to one point. This is always the case in strabismus simplex.

To see any object distinctly, the patient only uses one eye, either always the same, or each eye alternately. In the first case (strabismus simplex), the sight is always impaired from want of exercise of both eyes. Not so in the second case (strabismus alternans), where both eyes are used alternately and retain their original power. The loss of power from this reason finds its analogy in the lesser strength and fitness for work of the left hand in most persons, in the difficulty

of moving the conchæ of the ears, although provided with special muscles to this purpose in certain pathological states.

The action of seeing, in strabismus simplex, is very much like that of a one-eyed person, with this exception, however, that in strabismus the deviating eye, though losing gradually its power for direct vision, retains the sight for such objects as are kept from view of the other eye by the bridge of the nose. The field of vision is therefore larger than in a person with one eye, and after strabismus has existed a long time, we find, on examination, a marked difference between the external and internal half of the retina in regard to perception of light.

Resuming, therefore, what we have said above, we find that in both paralysis and strabismus there is deviation of one eye in a certain direction, but that the paralyzed eye cannot move with the other, while the squinting eye always follows. Only there is an inability to bring both visual lines to bear upon the same point together. Besides, in paralysis, there is double sight, which is not the case in strabismus.

From what we have said about the gradual loss of sight of a deviating eye, it will be clear that to let such an eye alone means to sacrifice its power of vision, and that it will be necessary to treat these cases as early as possible. In most cases, strabismus appears about the fifth or the sixth year, rarely before or after. This prevalent age for the formation of strabismus is already in itself an indication to the prevalent cause of the disease, of which I now wish to speak.

Among the diseases of the eye which have been better understood since the invention of the ophthalmoscope shed new light over this organ in its state of health and disease, and led to further investigations in the laws of refraction and accommodation, belongs certainly strabismus.

The former ideas of the causes of strabismus have undergone a great change and have been altogether discarded, or at least have been assigned a very subordinate position. When we compare the older handbooks with the works of more modern authorities, we find that while, in the first, strabismus is considered as a disease in itself, in the latter it is regarded as a symptom, and while in the former strabismus is mostly attributed to external causes, the latter explain it through the laws of refraction of the eye.

In the year 1861, at the session of the Ophthalmological Congress in Paris, Prof. Donders made public for the first time his researches concerning the pathogenesis of strabismus. And from that time his clear exposition of theories, founded upon and proved by numerous observations, has taken the place of the different explanations found in the older handbooks. To clearly understand this theory, it will be useful to say a few words about the refraction and accommodation of the eye.

In regard to the power of refraction of the transparent parts of the eye, we find three different states, for which, adopting the nomenclature given by Donders, we have the names of the emmetropic, hypermetropic and myopic eye.

In the emmetropic eye the waves of light, emanating from a source situated at an infinite distance, are broken in such a manner that those coming in a parallel or almost parallel direction, are united again in one point of the retina, the different points, however, of which the object is composed forming a reversed image of this object. If this object comes nearer, the waves of light do not longer run in a parallel direction, but they diverge, and the nearer it comes, the more they diverge. If the eye should remain unchanged those divergent waves would not find their focus in the retina, but somewhere behind that membrane. But the eye possesses a beautiful mechanism, by which it can adapt or "accommodate" itself for these diseases. By contraction of the ciliary muscle it presses the elastic lens, thereby curving its anterior and posterior surface more than it is in the state of rest. It provides itself, so to speak, with a stronger lens, and the same effect is produced as when a lens of certain focus had been placed before the eye in its state of rest; that is, divergent waves of light find now their focus also on the retina. This power of accommodation is the strongest in youth, and already at sixteen years it is not so strong as at ten, and gradually it becomes less. Of course, if we look at near objects, we are obliged to converge the visual axes, so as to meet in the object before us. The more we converge, the more we are able to accommodate.

If the eye is hypermetropic, parallel waves of light, in place of being united into one point on the retina, find their focus at some imaginary point behind the retina. The axis of the eye, from the centre of the cornea to the yellow spot, is in reality too short. The impression made upon the retina by any point from an object situated at an infinite distance, is not a point, but a circle, a horizontal section of the cone of waves, formed after the refraction, and more or less large, according to the distance between the retina and the imaginary focus behind it. The projection of any such object upon the retina is not formed of points, but of circles, which partly cover each other and thereby the appearance is blurred. Just the same thing happens when divergent waves of light fall into the eye, when it is in a position to receive parallel waves. But we saw how, in this case, the eye adapts itself to bring these waves to a focus on the retina, and the hypermetropic eye does the same. By changing the surfaces of the lens, by curving it to a higher degree, it brings these waves into one point on the retina. Here now appears a great difference between the emmetropic and the hypermetropic eye. For, as the first only accommodates its eye for divergent rays, for near objects, and completely relaxes its accommodation when looking at an infinite distance, the hypermetropic eye has to use its ac-



accommodation to perceive parallel rays, and when the object comes nearer, has to add to this just as much as the emmetropic eye uses for the same distance.

In the myopic eye, the waves of light, in place of finding their focus on or behind the retina, are united in some point before that membrane, when the object lies at infinite distance. Only such waves as come from a nearer source, and consequently running in a divergent direction, can be focussed on the retina. Hence, the nearsighted eye very distinctly observes objects, even very small ones, which are brought very near to the eye. However, it must always be borne in mind, that the object, when brought very near, is also seen under a greater angle of vision. If we compare such an eye with the emmetropic eye, we see that, while the farthest point for distinct sight for emmetropic eyes is situated at an infinite distance, for the myopic eye it lies at definite distance, and, according to the degree of myopia, every object within this distance can be distinctly seen, but beyond that distance the sight is indistinct.

These few remarks I thought it would be fit to make before repeating the statement, made by Prof. Donders, concerning the cause of strabismus, and which contains the following rules:—

1st. Strabismus convergens is mostly caused by hypermetropia.

2d. Strabismus divergens generally is produced by myopia.

To explain how strabismus convergens can proceed from hypermetropia, we must shortly repeat a few of the statements made above. It will be remembered that the hypermetrope must accommodate his eye for infinite distances, and that, when looking at near objects, he must add just as much as the emmetrope uses for the same distance. Also, that accommodation always is accompanied with convergence, and that the greater the convergence the more we can accommodate. We also saw that strabismus mostly begins about the fifth or the sixth year. It is the age when the eyes begin to be used already for closer and more constant occupation, when the power of accommodation is more continually brought into action. Now it is very natural that where accommodation must be used to a great extent, there is an inclination to increased convergence. This exists more or less in each hypermetropic eye. But the effect of this strong convergence is far from pleasant. We can make ourselves hypermetropic, supposing we are emmetropic, by applying very strong concave glasses to the eyes. If now we try to converge, we see immediately that convergence for very short distance is followed by double images of the objects which are observed. Exactly the same thing happens with the hypermetropic eye.

At the commencement, squinting appears only periodically, but if nothing is done to prevent it, the intervals become shorter, and at last squinting becomes permanent. At the same time the patient, troubled in his vision by the more or less complete double images, learns to suppress the image formed upon the retina of one eye,

which begins to lose its power, thereby greatly contributing to the permanency of strabismus.

But of course not every hypermetropic eye is attacked by strabismus. The circumstances which give rise to this deformity, when hypermetropia exists, are, in the first place, an innate difference between the power of vision and the refraction of both eyes. Partly on account of astigmatism, partly from some, as yet unknown, anomaly of the retina, there very often exists a marked difference between the refraction and the power of sight of both eyes. In both cases, but especially if both circumstances, less quantity of sight and greater degree of hypermetropia, occur in the same eye, the consequence will be that already for great distances the images are very indistinct, because they never can cover identical points of both retinae. For shorter distances, where the accommodation has to be increased and strong convergence of the visual axes to be brought into action, the trouble in distinct vision is eminent. Here, and in every analogous case, there is nothing left the patient but indistinct vision with both eyes, or distinct vision with one eye, with gradual loss of power of the other eye, and strabismus. If the person is old enough, he can exercise his sight so far as to form a tolerably correct idea from the indistinct images, and this is by the optic nerve transmitted to the brain, and in this way strabismus can be prevented. But, especially in children, squinting is readily formed. They learn to suppress the image formed on one eye; practically speaking, they put one eye out of the way and see only with the best. Of course, the other eye receives impressions from outside objects, but these do not fall on the macula lutea, and the more remote they are from that spot, the less they will interfere with the distinct sight of the other eye, and the easier it can be suppressed. First for this reason, and secondly for the greater facility of accommodation, one eye is turned in more than the other and periodical squint is changed into permanent strabismus.

Another cause is the existence of opacities of the cornea. Pagenstecher and Saemisch, two German oculists, showed first the frequent relation between the two anomalies. But Donders does not admit this to the same extent, unless, as in the first category, hypermetropia exist. In this case, the whole state is brought back to that of the hypermetropic eye, with less quantity of sight in one eye, which, as we have seen, is one of the great causes for strabismus, when defective refraction exists. Ruete first directed the attention to the circumstance that the inflammatory process by which the maculae corneae are produced, can extend under the conjunctiva over one or more of the muscles or their surrounding tissues. He thinks that at first in this way a spasmodic shortening is produced, which gradually becomes real shortening and causes strabismus. It is not improbable, however, that the real relation between the two diseases is defective refraction again, and that the reason why strabismus

occurs, is that the inflammation and consequent intolerance to light cause the patient to close one eye, or at least, when he wants to see, to open only one eye. In this case, he can converge very much without being troubled by double images, but the convergence becomes at last permanent. In the same manner, we will often observe that at the commencement of strabismus from hypermetropia, the deviation is much stronger if one eye is covered, and the short distance of the object from the eye necessitates an excessive amount of accommodation.

The forming of strabismus is also made easier by circumstances which give more occasion to strong convergence, and to these belong, especially, a greater power of moving the eye inward. Many persons have an innate insufficiency of the outer or inner straight muscle, to a more or less degree, and whereas the latter excludes the possibility of strabismus convergens, the first facilitates it. We observe this insufficiency of the *musculus rectus externus* in many persons who are able to converge the eyes to a great degree, thereby simulating strabismus convergens. If hypermetropia exists, this insufficiency can easily increase, and strabismus follow. These are the cases where strabismus is produced by the habit of mimicking.

External causes may cause strabismus, not however to such an extent as was formerly believed. We spoke already about the influence of opacities of the cornea and bad habits, and we have seen that, in fact, they mostly act as indirect causes, the direct cause being, in almost every case, the persistence of defective refraction. Where statistics have been made from a large number of observations, we find this in 80 to 90 per cent. of the cases.

The relation of divergent strabismus to myopia is also very clear. The myopic eye is elongated, acquires an ovoid shape, and thereby its movements, especially inward, are impeded. Yet the objects must always be brought very near to the eye, and strong convergence causes fatigue. Therefore, while one eye turns inwards, the other is allowed to turn outwards, and the forming of double images and their consequent mental suppression follows as in hypermetropia.

It is worthy of observation that strabismus is not so much connected with the very high degrees of hypermetropia, but generally with the medium degrees. This occurrence can easily be explained. For even with the greatest strain on the accommodation and the strongest possible convergence of the visual lines, such eyes cannot receive a distinct view of near objects. Consequently, the person learns to obtain nearly correct impressions from the indistinct images which are formed on his retinae.

(To be continued.)

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UNIFORM TEMPERATURE.—An invalid now at Santa Cruz, West Indies, sends a record of temperature for December, 1872. Observations were made four times in each day. The highest reading of the thermometer at 8, A.M., was  $80\frac{1}{2}^{\circ}$ , the lowest  $77^{\circ}$ ; highest at noon  $84^{\circ}$ , lowest  $80^{\circ}$ ; highest at 2, P.M.,  $83\frac{1}{2}^{\circ}$ , lowest  $80^{\circ}$ ; highest at 7, P.M.,  $81^{\circ}$ , lowest  $79^{\circ}$ .

## Progress in Medicine.

### REPORT ON MIDWIFERY AND GYNÆCOLOGY.

By W. L. RICHARDSON; M.D.

#### PREGNANCY.

*Action of Sulphate of Quinine on the Uterus.*—(*Bulletin de la Soc. de Méd. de Gand*, 1872.) Dr. Bouqué read before the Société de Médecine de Gand, at one of the earlier meetings of the present year, a communication in which he claimed to have proved the great value of sulphate of quinine as a substitute for ergot (*Boston Med. and Surg. Journal*, May 2, 1872). Since that time Dr. Bouqué has been engaged in still further studying the subject, and has recently read a second paper before the same society, in which he brings forward still further proofs of the power of quinine to produce uterine contraction.

In France Dr. Duboué (*Pau*) admits the power which quinine has to act thus upon the uterus, and also claims that he has frequently arrested, by its use, severe nasal, intestinal and uterine hæmorrhage, even in cases where the question of any possible malarial influence could not be considered. From Belgium, Dr. Deneffe reports two cases of uterine hæmorrhage, which were thus treated with the most satisfactory results. Several articles on the subject have recently been published in the Italian journals, the most important of which appeared in the *Gazetta Medica Italiana—Lombardia* (1871).

Dr. Bouqué cites three cases of his own in which he gave quinine for severe uterine hæmorrhage, with the very best results. He also quotes in detail three cases reported by Dr. Omboni (*Gaz. Med. Italiana*), in which the patients were threatened with so-called puerperal fever, as shown by rapid pulse, increased temperature, suppression of lochia and milk, more or less abdominal pain and hurried respiration. In these cases the administration of quinine (3 grains every second hour) seems to have acted like a charm. Dr. Bouqué reports also a similar case in his own practice. In a case of uterine hæmorrhage, coming on the eighth day after delivery, the administration of quinine immediately arrested the flowing.

In certain cases, however, Dr. Bouqué has found that quinine, given in sufficiently large doses to act upon the uterus, has also acted upon the bowels, giving rise to a very decided diarrhoea. In these cases the addition of opium has at once checked this unfavorable action of the drug.

Dr. A. Walraven (*Lamswaarde*) has also recently submitted a communication to the same society, in which he states that he has frequently seen an abortion follow the use of sulphate of quinine, especially in those cases in which the patient has taken the drug in large doses; and he adds that he has always observed that this accident is most common in plethoric women. According to this writer, quinine is more apt to produce an abortion when given in the earlier or later months of pregnancy than when taken between the fourth and seventh months. In confirmation of his views he gives the details of four cases in which abortion followed the administration of sulphate of quinine. He also quotes three cases reported by Dr. Landman (*Helvoort*) in which the same results were noticed.

On the other side of this question, we must briefly allude to a communication read before the same society, by Dr. Cauterman, in which the writer reports two cases which, though not proving the new property attributed to sulphate of quinine, yet tended to provoke inquiry as to whether the results observed might not be due to the drug which had been given. The writer then goes on to allude to the very large class of cases in which, for one reason or another, sulphate of quinine was administered, without however producing any action on the uterus. On the whole, Dr. Cauterman would prefer still to rely on ergot in all cases where speedy action is called for, although he strongly advocates the further investigation of the physiological action of this drug.

The Society, under whose auspices these investigations are being carried on, have invited communications on this subject from all members of the profession who have had any experience in the use of this preparation of quinine, and it is to be hoped that some interest in the question under discussion will be shown by the medical profession in America.

*Position of the Gravid Uterus.*—Dr. Guyon contends (*Arch. de Phys.* iii., i. p. 75) that the cause of the inclination of the pregnant uterus to the right is not the result of the natural habit of lying on the right side, the using principally the right arm (*Pajot*), the lateral position of the placenta (*Levet*), the shortening of the right round ligament (*Boivin*) or the anatomical position of the rectum (*Désormeaux*), but that it is owing to the inclined plane which the under surface of the mesentery presents to the uterus when it rises above the pelvic brim.

*Universal Pruritus.*—Dr. David Page relates the following case (*Brit. Med. Jour.*, Sept. 21, 1872). A lady, æt. 34, the mother of six children, was in the seventh month of utero-gestation, when he was summoned to attend her for some gastric disorder, as indicated by heartburn and acidity. It yielded to bismuth and quinine. A severe attack of facial neuralgia followed. Change of air was advised. The neuralgia ceased and an attack of universal pruritus began.

The whole cutaneous surface was affected with the most distressing itching, unaccompanied by any outward manifestation whatever. The paroxysms at first were chiefly at night, but soon became less intermittent, and were present throughout the day. Previously to her last confinement, a similar, though less severe train of neurotic phenomena had occurred. Treatment seemed useless. After a two weeks' trial of various remedies an attack of heartburn supervened. No sooner, however, did the gastralgia disappear than the facial neuralgia returned. Meanwhile the pruritus had disappeared. After lasting ten days, the neuralgia was superseded by the pruritus. Hydrate of chloral, in 20 grain doses at bedtime, was ordered. This produced sleep, and the patient awoke free from pruritus. A week later delivery took place. The pruritus did not entirely cease till ten days after confinement, although the severity of the attack was greatly modified when compared to the same symptom before parturition.

*Variola during Pregnancy.*—In the last edition of his work on midwifery Prof. Schroeder thus briefly states the present opinion of the best German authorities as to the probable prognosis in cases of variola occurring during pregnancy.

"During the course of variola, abortion may take place, the child being born either dead or alive. When born alive it is rarely affected with



variola, but the disease usually breaks out soon after birth. Often, however, the pregnancy will run its regular course and the child may be born subsequently, either perfectly healthy or covered with the scars of small-pox. Cases are on record where children, whose mothers do not have the disease, have been born with the pustules on them, and even in cases of twins one child only has been seen more or less covered with the eruption, the mother being perfectly healthy. As a rule, vaccination will not take in children whose mothers have had variola during pregnancy."

Cases are on record in which vaccination of the mother during pregnancy seems beyond a doubt to have extended its protecting influence to the child. Nor can it be questioned but that a child may even die of variola in utero, or be born more or less covered with small-pox pustules, while the mother may wholly escape the disease. It would therefore seem proper to advise pregnant women, during epidemics of smallpox, to be vaccinated or re-vaccinated, in order that the foetus in utero, as yet not vaccinated, may receive through the mother the protecting influence of the vaccination. So far as we know, vaccination during pregnancy has never produced any injurious effect on the mother or child.

In those cases where the mother has an attack of variola during her pregnancy, and the foetus dies in consequence, the latter may be expelled at once from the uterus, or, as has been reported by Dr. Milne (*Trans. Lond. Obstet. Soc.*, vol. ix. p. 110), may be carried till full term, and then be thrown off covered with the traces of the disease.

In fatal cases of variola the child is usually thrown off the day before death (*Marson*).

It is probable that an interval of time elapses between the appearance of variola in the mother and in the foetus, and this will account for the fact frequently noticed, that when a child is born during the primary fever of the mother, it has no eruption till some days later, if at all, while, if born after the secondary fever has appeared, it is usually more or less covered with the pock marks at birth, or may even be born dead.

*Post-mortem Parturition.*—Dr. Darby reported to the Dublin Obstetrical Society the following account of a case:—A patient, 24 years of age, the mother of one child, entered the Rathdown Fever Hospital with typhus fever. She was in the sixth or seventh month of pregnancy. She died four days after entrance. Owing to the smell from the body, she was at once removed to a small room adjoining the ward. The nurse, on entering the room some six or seven hours later, discovered a putrid foetus, which, with the secundines, had escaped from the body.—(*Dub. Jour. Med. Sci.*, Sept., 1872.)

In a paper read (July 3, 1872) before the London Obstetrical Society, Dr. Aveling referred to forty-four cases of *post-mortem* parturition which he had found on record. From a careful examination of these cases, the reader deduced the following conclusions:—1. Expulsion of the contents of the uterus may take place after death without the aid of art. 2. This may occur in cases in which no symptom of natural parturition can be discovered before death. 3. Many of the manœuvres and accidents which take place in labor during life may occur in *post-mortem* parturition; such, for example, as expulsion of the placenta, spontaneous evolution of the foetus, and the prolapse, inversion and rupture of the uterus. 4. Expulsion of the uterine contents, and

accidents which accompany labor, may be caused after death, either by the contracting power which persists in the uterus after the death of the rest of the body, or by the pressure exerted upon the uterus by the gases of decomposition which are pent up in the abdomen. 5. Of these causes, the latter is the most frequent. 6. After the death of its mother, a child may continue to live in the uterus for many hours. 7. After the death of a woman undelivered, no time should be lost in removing the fœtus.—(*Lancet*, July 27, 1872.)

#### LABOR AND THE PUERPERAL STATE.

*Placenta Prævia*.—Wallace. (*Edin. Med. Jour.*, Nov., 1872.) In a paper, read recently before the Obstetrical Society of Edinburgh, Dr. John Wallace, of Liverpool, calls attention to a new method of ascertaining the placental position, in cases of placenta prævia, by vaginal stethoscopy. A common stethoscope can be used, but a longer and curved instrument will be found more convenient. By carefully moving the stethoscope in all directions from the os uteri as a centre, the whole lower zone of the uterus can be explored in succession. When the presentation is central, the bellows murmur, which marks the position of the placental attachment, is heard over every part of the upper pelvic strait. If the attachment be partial or marginal, a combined vaginal and abdominal stethoscopic examination will detect the site of the placenta whenever it has an anterior or lateral position; while the posterior situation of the vaginal bruit, and the absence of the characteristic signs by an abdominal examination, will determine its partial presentation inferiorly and posterior situation superiorly.

As a mode of supplementing, but with no view of superseding, the existing methods of treating this class of cases, Dr. Wallace advises the topical application of a powerful hæmostatic directly to the immediate source of hæmorrhage. For this purpose he uses a solution of the strong liq. ferri perchloridi, one part to three or four of water, applied by means of pledgets of cotton-wool, with a withdrawing thread attached, directly through the os uteri to the ruptured utero-placental vessels. The application of these pledgets is to be repeated several times, and the last pledget introduced is to be left for twelve or twenty-four hours. The astringency of the application shrivels the mucous lining to such an extent that its vessels of nutrition are contracted and obliterated, and the membrane is shed, without however leaving any raw, ulcerated surface; and, in a similar manner, the vessels of the placenta are not only closed by elongated clots, extending to a pretty considerable distance along their course, but the fibrous tissues are so constricted that the part of the placenta so acted on has the feel and appearance of a solid fibro-cartilaginous mass.

In support of his new method of diagnosing this abnormal position of the placenta, Dr. Wallace cites two cases in which he was enabled, by the use of the vaginal stethoscope alone, to predict the coming difficulty, while, in a third case, which certainly showed some of the symptoms of placenta prævia, a stethoscopic examination enabled him to make a more favorable prognosis, and the result in all three cases showed the accuracy of his diagnosis.

Some years ago, Nauche invented an instrument, since known as the metroscope, which he introduced into the vagina and applied directly to the neck of the uterus. In this way he claimed that, as early as the third

month, the foetal movements could be detected, and those cases in which the placenta was attached over the mouth of the womb could be recognized. The idea of vaginal stethoscopy, therefore, dates much earlier than would be inferred from the paper to which we have alluded. The topical application of a styptic is certainly an original plan, but one which should only be used in those cases in which the hæmorrhage is either very slight, or is easily controlled, as otherwise much valuable time would seem to be wasted, and the life of both mother and child often seriously jeopardized.

*Convulsions during the removal of the Placenta. Death.*—Dr. A. B. George reports the following case. (*Brit. Med. Jour.*, Oct. 12, 1872.) Mrs. W., aged 24, had been confined three times in two years. The first labor was normal. The second time, the placenta was adherent at a point near the fundus, requiring manual interference. Twelve months later, she was again in labor. The child was born ten minutes before the doctor arrived. The placenta still remained. She was cheerful; pulse regular and moderately firm. Flowing normal in amount. After waiting ten minutes, and finding that gentle pressure on the abdomen, combined with traction at the cord, failed to dislodge the placenta, he introduced the hand to remove it. The moment the hand was in the uterus the patient was seized with convulsions, accompanied by stertorous breathing, and died in less than five minutes.

Dr. J. Hall Davis has reported a case very similar to the above. (*Trans. Lond. Obstet. Soc.*, vol. xi. p. 285.) The patient, without exhibiting any symptoms premonitory of approaching convulsions, expired almost immediately when the hand of the operator had entered the uterine cavity. Dr. Ingleby has also reported a case in which, the moment the operator's hand had reached the uterus, the patient became violently convulsed, and died in less than a minute. Dr. F. H. Ramsbotham also relates a case in which convulsions came on the moment his hand had entered the uterine cavity. In his case, however, the woman recovered. Fatal results, or even convulsions, rarely of course follow the introduction of the hand within the uterus; yet even one such case as that reported by Dr. George should put us on our guard against attempting to remove a retained or adherent placenta, without first administering an anæsthetic for the purpose of reducing to a minimum the uterine irritation necessarily occasioned by the introduction of such a foreign body as the operator's hand within the uterus.

*Spondylotomy.*—A successful case of this operation, under very peculiar circumstances, is reported by Drs. Affleck and A. Macdonald. (*Edin. Med. Jour.*, July, 1872.) The case was one of shoulder presentation, complicated with rigid os, prolapse of the funis, and such a decided narrowing of the conjugate axis at the brim as to render version impossible. The spine was found to be sharply bent back over the pelvic inlet, while the head was lying so high as to render decapitation exceedingly difficult, if not impossible. The point of section selected was the second dorsal vertebra, the instrument used being a pair of long vaginal scissors. The intercostal spaces were avoided, owing to the fact that both blades of the scissors were sharp, and the operator feared to use them as fearlessly as if one of the blades were probe pointed. The spine having been cut through, a foot was then drawn down, and the child delivered, although even then with considerable difficulty, owing to the pelvic deformity. The patient subsequently made a good recovery.

This operation, first recommended by Michaelis, was twice successfully performed by Sir James Simpson (*Edinburgh Med. Jour.*, Feb. 1866) in cases where, owing to the position of the child, he was unable either to turn or decapitate. In cases where version is impossible, decapitation or spondylotomy are the only chances left by which the mother's life can be saved. The latter operation possesses two great advantages over the former, inasmuch as the difficulty which often attends the subsequent delivery of the head is avoided and a much smaller surface of projecting bones is left, thus lessening the liability of serious injury being inflicted to the soft parts of the mother.

*Puerperal Diseases.*—In the last volume of the *Medical Times and Gazette* (July 6, 27, Aug. 24, Oct. 26), Dr. E. Copeman reports a third series of cases of puerperal diseases treated with turpentine. The series includes a variety of conditions coming on after delivery, in all of which, however, the symptoms were more or less indicative of that disease at present known as puerperal fever. A summary of the cases thus far reported by Dr. Copeman are as follows:—

	Deaths.	Recoveries.
1st series,	21	6
2d series,	36	13
3d series,	22	5
	79	24
		55

The third series, which has just been reported, were, as a rule, ushered in with a chill, followed by rapid pulse, more or less disturbance of the lochia and milk, diarrhoea, tympanites, frequently cerebral symptoms and general depression. The treatment consisted in the use of turpentine fomentations applied over the abdomen in all cases where the tympanites was marked and accompanied by more or less abdominal pain or tenderness. Turpentine enemata were administered in those cases in which they were not contraindicated by pre-existing diarrhoea. In most of the cases, with the exception of those which were accompanied by excessive nausea and vomiting, the *oleum terebinthinae* was administered internally, in doses varying from a half drachm to a drachm every four hours. Opium was also given to relieve pain and to produce sleep. No bad effects followed the use of the turpentine, but, in almost every case, a marked improvement seemed to follow its administration.

In a subsequent number of the same journal (Nov. 30, 1872), Dr. Copeman gives the account of eleven cases of *phlegmasia dolens* which were successfully treated by warm turpentine fomentations, kept applied constantly to the affected limbs. One of these cases was developed in a non-puerperal woman, while a second occurred in a man.

As regards the nature of puerperal fever, Dr. A. D'Espine has recently contributed a very long article which has been continued through several of the recent numbers of the *Archives Générales de Médecine*, in which he claims that puerperal fever is always the result of an absorption, by means of lacerations and wounds of the utero-vaginal canal, of a greater or less amount of septic material; the severity of the fever depending, in a great measure, on the amount of such material absorbed. The puerperal condition has no special connection

with the production of this disease, as a very similar condition is produced in all surgical wards whenever there is a similar absorption of septic material. During the course of this septicæmia, puerperal pyæmia may occur as a complication, but in all such cases, as a rule, it coincides with a suppurative inflammation of the uterine veins. This complication of pyæmia is comparatively rare, and doubtless owes its origin to so-called septic embolisms. He utterly denies the existence of any such disease as milk fever, and claims that the fever which frequently occurs during the first seven days after confinement, is almost always due to the re-absorption of a portion of the lochia by the fissures or wounds of the utero-vaginal canal. It is possible for this condition to continue for some weeks, the lochia being in these cases, as a rule, fetid. A close examination will often detect in these cases an ulceration of the cervix uteri or vagina, which are the points of absorption.

[To be concluded.]

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## The Hospitals.

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### BOSTON CITY HOSPITAL.

SURGICAL CLINIC BY DR. CHEEVER.—DEC. 3.

I.—*Abscess under the Pectoral Muscle*.—A young man, apparently healthy, though with a suspicious eruption on the forehead, presented an obvious swelling in the region of the right pectoral muscles and a partial obliteration of the axilla; considerable pain, and, in one place, an apparent effort to point. Abscesses in the axilla are most common in the cellular tissue, and arise in the axillary glands, which swell and inflame, causing a lump about the size of a nut, but usually making slow progress toward suppuration. Once open, pus exudes and continues to flow for a long time afterwards, as is usual in all abscesses where the lymphatic glands are involved. The case we have to-day is essentially acute, and therefore of a wholly different prognosis. It is tending to open and discharge, and as the superjacent tissues are so movable and the accompanying symptoms not severe, we shall not lance it at present. In a similar case in this hospital last year, there was found, when the abscess was opened, a very extensive burrowing under the muscles and into the axilla, requiring, before it could heal, daily syringing, and disinfecting treatment. We apply a poultice here to allay pain and to hasten suppuration, and especially direct the patient to keep quiet, and thus not extend the abscess by muscular action. The primary cause of these abscesses is usually traumatic. It may be, here, of specific origin, coupled with a low state of health. More commonly, however, they follow direct injuries to the parts. They must be distinguished from emphysematous infiltration of the cellular tissue, such as might follow a broken rib, letting out the air from the lung. The diagnosis of emphysema is made by the feeling of crackling under the skin, like pressing on a sponge. Deep abscesses, burrowing among the muscles, are always dangerous, but most especially when they occur in the neck. If, in these cases, the burrowing process is allowed to continue, the patient rapidly runs down in health, and even pleurisy might follow. Sex makes a great



difference in abscesses in this neighborhood. In a woman, you would at once think of abscess of the breast, or even of a mammary tumor. Submammary abscess may occur in the female, during lactation, and tends to point towards the axilla. Again, mammary abscess proper may occur in a man, though the excess of female cases over males is 100 to 1.

II.—*Hand run over by a Wagon*.—There was great cedema of the back of the hand; the fingers were cold, but not so cold as to necessitate gangrene. The great danger was that pus would burrow up under the annular ligament, allowing the inflammation to extend up to the elbow. The pain is much less when the patient uplifts the hand, there being then less blood circulating in the limb. There were three or four lacerated cuts in the palm. Sloughing rarely takes place in the hand or fingers, or at most only of the tendons, because of the abundant supply of blood, and the proximity of the arm to the heart. In a similar wound in the foot you would expect sloughing of several toes, and this though the toes have a quadruple supply of arteries. Also in amputations of the foot and hand, the flaps of the foot are much more liable to slough, on account of the distance of the circulation from its central organ. The danger here is that on recovery, the tendons will become stiff and adherent. Therefore, towards the end of the case, we shall direct him to try to use them somewhat. For the present we shall keep them still on a splint. When the foot is injured, the patient keeps it quiet because of the pain caused by motion. Not so the hand, which does not have to bear the weight of the body.

III.—*Felon [Tendinous Whitlow]*.—Felon is a suppuration beneath the fascia of the last phalanx of the finger or thumb. Its diagnostic appearances are, on the front or palmar surface, a white look, with a feeling of hardness extending down the finger toward the palm. On the back, there is usually redness and cedema, leading one to suppose the chief trouble to be situated there, whereas the pus always collects on the palmar side. In a deep whitlow, you do not get any fluctuation, because the trouble is so deep and the parts so tense. The pain is always excessive. An early diagnosis must be made and the treatment be decisive, else the young surgeon will find the result anything but creditable to him. The finger must be at once laid open to the bone, to allow free exit to the pus. Always open by cutting outwards from the palm, as then, when the patient shrinks and withdraws the hand, he helps you cut out the knife; and you are thus more successful in cutting to the bone at the first attempt, which in practice is an essential point, the agony of the cut being such that human nature will not allow you to try it a second time. The discharge of the pus is followed by immediate relief of the pain. If you do not recognize the necessity of opening it, the felon slowly proceeds to a natural opening, which is very small—about the size of a pin's head. This, when an abscess is in the soft parts, is of little consequence; but in one near any bone is extremely disastrous, leading to caries, sloughing of the last phalanx and shortening of the finger. The nail then rests only on the flesh, and turns inward, causing a deformity.

When the redness on the back of the finger is not accompanied with palmar hardness, we have abscess of the nail only (onychial), causing, if not opened, at most, loss of the nail, which, after a while, grows out again from the matrix. When the patient is of the laboring class, the

skin and other parts are tougher, the felon is slower and the pain and suffering are proportionally greater, while the external appearances are less. In such cases we encounter greater risk of the burrowing of the pus to the palm, and this once accomplished, there is but little to prevent it extending up to the elbow. As a rule, the stronger the patient, the more danger if you do not open early. When the swelling has extended to the palm and forearm, the annular ligament sometimes gives a saddle-like appearance to the abscess, which requires to be immediately and freely opened to give exit to the pus. In incising palmar abscess, cut in front of the root of the thumb, thus avoiding the palmar arch which passes across the palm on a line with the base of the thumb, and if severed would present a most dangerous hæmorrhage. On the forearm, incise in the middle, thus avoiding the radial artery, and the ulnar artery and nerves, risking only the median nerve, which, however, lies very deep. Lately, in the journals, some surgeons have advocated opening a felon on the side, but the danger of lacerating the nerves, and the inconvenience of the bleeding of the digital arteries inclines Dr. Cheever to think the old way the best. Ether is not usually employed in opening felons, as the operation is but momentary, whereas the after-effects of ether are very unpleasant, especially in a private office.

[Dr. C. then opened a digital felon, and gave a practical exhibition of the agency of the patient in effecting a deep incision, provided the cut is made in a direction away from the palm.]

*Mucous-tissue Tumor of Cheek.*—A healthy-looking girl presented a movable tumor in the left cheek. It was thought to be a cystic tumor from occlusion of one of the salivary ducts, and was accordingly punctured with a trocar from within the mouth, but without result. An opening was then made through the mucous membrane from within, to avoid a scar of the cheek, and any paralysis from section of the branches of the facial nerve, and the tumor was readily enucleated and cut from its pedicle. On microscopical examination it was pronounced by Dr. Warren to be a myxoma, or mucous-tissue tumor, of the consistence of jelly, but not in any way connected with the salivary ducts.

*One week later.*—There is now an extensive œdema of the left cheek resembling mumps, and likely to last, even a month. Appearance otherwise natural.

*One week later.*—(Edema still very apparent and painful on pressure. At the third week, the incisions in the mouth were healed, but a small abscess pointed externally, was opened by a minute incision, and the patient was then discharged, well.

*Hay-cutter Amputations.*—Three fingers were reāmputated after an accident from a hay-cutter. Dr. C. stated that some surgeons had thought that this operation could be spared, but if we let these and other similar clean accidental amputations alone, there results a much poorer kind of stump, with protruding bones and consequently tender extremities, and a very slow process of healing; whereas the stump we gain by surgical reāmputation is well worth the loss of the additional half inch.

[Of the three fingers reāmputated, one was amputated in the shaft and two at the joint. The two at the joint healed much quicker than the other. Is this always so?]

*Compound Fracture of Elbow-joint.*—Dec. 1st, an Irish boy, of about 19, suffered an injury of the right elbow, breaking off a T-shaped piece

from the humerus. The outer condyle was broken off. The radius and ulna were uninjured. There was also an extensive lacerated wound on the radial side of the elbow, communicating with the joint. Notwithstanding these lesions, there was still perfect sensation and pulsation in the hand, which gave rise to the hope of saving the arm, as the arteries were still intact. It was found impossible to get at the ulnar nerve fragments through the wound caused by the accident, and accordingly a longitudinal incision was made on the ulnar side behind the elbow, through which the fragments were extracted, and the regular operation of excision of the joint performed. All the remaining articular surfaces of the joint were sawed off, the ulnar nerve (the important point in this excision) being carefully drawn to one side. The arm was slightly flexed, and laid in a hollow tin splint.

The incision in this case was made longitudinal in order to save the uninjured band of skin and fascia over the tendon of the triceps muscle, insuring a freer use of the limb after recovery. Dr. C. thinks that the transverse incisions which are spoken of in the books are injudicious, and tend to impair needlessly the future usefulness of the limb. In the present case, the wounds, now a week old, are doing very well, though the clean cut surgical incision is granulating more freely than the ragged wound of the accident. After a while, we expect to be able to put on an external angular splint, and allow the patient to sit up. In a similar case in the wards a year ago, where the patient had previously lost the leg on the same side in a former accident, although the band of the skin in front of the elbow was narrower and the pulsation in the hand feebler, and there was also great loss of soft tissues behind, we yet were able to save the limb; which was doubly important to the patient, as with the leg and arm both lost on the same side, locomotion would have been difficult, from defect of balancing power.

At the third week the patient had a small abscess point at the flexure of the elbow. This was opened, and he is now doing extremely well.

### Bibliographical Notices.

*Expression of the Emotions in Man and Animals.* By CHARLES DARWIN, M.A., F.R.S., &c. Pp. 374. New York: D. Appleton & Co. 1873. (From A. Williams & Co.)

PROBABLY no one has taken up this latest work of Mr. Darwin without a preconceived idea that it was written in support of the author's well-known views; an impression which loses none of its force during the perusal of the book, though no direct statement is found to warrant it. On the last page is the following passage, which is of importance as showing Mr. Darwin's position: "We have seen that the study of the theory of expression confirms to a certain limited extent the conclusion that man is derived from some lower animal form, and supports the belief of the specific or sub-specific unity of the several races; but as far as my judgment serves, such confirmation was hardly needed." Nevertheless, there is an evident desire throughout to maintain these points, but, by an error identical with that which the author committed in that part of his preceding work\*

\* The Descent of Man and Selection in Relation to Sex.

which treats of the descent of man, evolution is continually used as a well-accepted fact for the support of doubtful ones. The methods of investigation, the number and diversity of sources from which information has been obtained, the careful and long-continued observation of children, neighbors and animals, are all admirable and worthy of the author of the "Origin of Species." On the other hand, some of the conclusions may be questioned, much of the physiology is vague, and the frequently recurring "contraction of the central fasciæ of the frontal muscle" is incomprehensible.

Mr. Darwin believes that most expressions and gestures may be accounted for by the following three principles: 1st. "*The principle of serviceable associated habits,*" which, in brief, is that as certain gestures are of service under certain circumstances in certain states of the mind, the recurrence of that state of mind will cause a repetition, to a greater or less extent, of the action in question, though it be of no use, or, at least, will occasion an effort to repress this manifestation which will itself be expressive. 2d. "*The principle of antithesis.* Certain states of the mind lead to certain habitual actions which are of service, as under our first principle. Now when a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these are of no use; and such movements are, in some cases, highly expressive." 3d. "*The principle of actions due to the constitution of the Nervous System, independently from the first of will, and independently to a certain extent of habit,*" which is to account for what cannot otherwise be explained, which is one of the recognized duties of the nervous system.

The first principle is the one most easily studied, and a strong case is made from it. The following is an example of its action. A dog, wishing to approach its prey without being observed, often doubles one leg up under him and pauses so as to advance as noiselessly as possible at a favorable opportunity, and this habit causes him to take a similar position when listening to any uncommon sound. Mr. Darwin has observed this when the dog was separated from the sound by a high wall so that it could have had no idea of advancing. The difficult subject of reflex actions is necessarily brought up. The fact that actions which were originally voluntary may be performed unconsciously and even unnecessarily is accounted for by the statement that "in such cases the sensory nerve-cells excite the motor cells, without first communicating with those cells on which our consciousness and volition depend." The second principle is more difficult to establish. The sudden change in the bearing and expression of a dog, who, going out savage and on the alert to inspect a supposed stranger, suddenly recognizes in him his master, is given as an example. The author accounts for the dog's position in the former state of mind by showing that in every respect it will be of service to him in his contemplated attack, but he cannot account for the sudden relaxation and humble aspect, &c., as these are of no use to the animal, except by saying that the whole expression is precisely the opposite of that which would be useful in the opposite state of mind and that it serves to make the animal's feelings plain to others. The third principle has to account, as best it can, for the sudden blanching of the hair, trembling, profuse perspiration from mental causes, and the increased or diminished secretion of certain glands.

Two very good chapters are devoted to the expressions of animals, and throughout the book there are interesting instances of some that are strangely human. For instance (p. 167) "The Indian elephant is known sometimes to weep. Sir E. Tennent, in describing those which he saw captured and bound in Ceylon, says, some 'lay motionless on the ground, with no other indication of suffering than the tears which suffused their eyes and flowed incessantly.'" On page 215, there is a description of the meeting of two chimpanzees which were introduced to one another in captivity. "They sat opposite, touching each other with their much protruded lips; and the one put his hand on the shoulder of the other. They then mutually folded each other in their arms. Afterwards they stood up, each with one arm on the shoulder of the other, lifted up their heads, opened their mouths, and yelled with delight."

The most important part of the book is that which treats of the mechanism of human expressions and in which it is attempted to explain their derivation. The subject of weeping (chap. vi.) furnishes an example of a kind of reasoning too often met with in this work. "The nature of the relation between the involuntary and energetic contraction of the muscles round the eyes, and the secretion of tears, cannot be positively ascertained, but a probable view may be suggested." One of the chief functions of the tears being to wash the eyes, the argument is continued as follows: "It is difficult to conjecture how many reflex actions have originated, but in relation to the present case of the affection of the lachrymal glands through irritation of the surface of the eye, it may be worth remarking that, as soon as some primordial form became semi-terrestrial in its habits, and was liable to get particles of dust into its eyes, if these were not washed out they would cause much irritation; and on the principle of the radiation of nerve-force to adjoining nerve-cells, the lachrymal glands would be stimulated to secretion. As this would often recur, and as nerve-force readily passes along accustomed channels, a slight irritation would ultimately suffice to cause a free secretion of tears." It is then argued that irritations of various kinds, among others the pressure from the contraction of the orbicular muscles in crying, would have the same effect. "We may see, as lately remarked, the muscles round the eyes of a person who reads a pathetic story, twitching and trembling in so slight a degree as hardly to be detected. In this case, there has been no screaming and no distention of the bloodvessels, yet, through habit, certain nerve-cells send a small amount of nerve-force to the cells commanding the muscles round the eyes; and they likewise send some to the cells commanding the lachrymal glands, for the eyes often become at the same time just moistened with tears. The author holds that if the former manifestations be repressed, the glands, being less under the control of the will, may still act alone; an explanation which, however necessary for the theory, is hardly satisfactory *per se*."

Blushing (chap. xiii.) for shame (distinct from reddening with passion) is, perhaps, the most decidedly human expression of emotion. Animals never blush. The author shows that it is common to most races of men, and that in those who go but slightly covered it occurs over a larger part of the body than in the civilized. As blushes result from causes (real or imaginary) which bring the observation of others upon us, it attacks the part to which attention is most likely to be



directed, namely, the face, especially when that alone is uncovered. Hence, anyone likely to blush thinks more of his face than of the rest of the body, and thus modifies its innervation. It may be said, on the other side, that the face is the most vascular part of the surface, and it is asking a good deal to call on us to suppose that the peculiar distribution of its vessels was essentially modified by so insignificant a cause as blushing.

The book is very readable, and will be found very instructive by any reader, whether he fully accepts the author's conclusions or not.

T. D., JR.

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### **Boston Medical and Surgical Journal.**

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BOSTON: THURSDAY, FEBRUARY 13, 1873.

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WE have received the Fourth Annual Report of the Children's Hospital, embracing the record of the work of the year just ended. It is a compendious statement of progressive success as regards the practical benefits which, in a medical point of view, the hospital has extended to a class of patients not included in any other hospital scheme in the city. Eighty-two children have been received as patients during the year, embracing twenty-four medical and fifty-eight surgical patients. The mortality amounted to only five.

We sincerely trust that this institution may in the future greatly enlarge the scope of its usefulness. There is abundant opportunity for just such a charity, while the obvious possibilities in the way of scientific observation need no favorable comment at our hands. But in the face of such a hope comes the opening statement of the report that while the "experiment" of the hospital has succeeded beyond the hopes of its founders, they are compelled to confess a critical condition of its finances. Surely, the liberal friends of this institution will not allow its future to be jeopardized for the want of means to carry it forward.

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THE LATE EMPEROR, NAPOLEON III.—It appears from recent and authentic advices from abroad that the Emperor's death was due to uræmia, ending in suddenly fatal coma, and not to chloroform, as was intimated by the telegraphic despatches. The probable presence of secondary renal disease, consequent on the progressive development of the calculus, was premised by the medical attendants and precautions taken accordingly.

The *Medical Record* (London), in commenting on the case and its complications, observes: "Had the sudden death of the Emperor, which took place an hour before the time appointed for the administration of chloroform for the purpose of an operation, occurred, as it

might well have done, while he was under the influence of the anæsthetic, it could hardly have failed to be set down to the temporarily debilitating action on the heart. There would have been nothing in the results of the *post-mortem* examination to contradict such a theory, as the appearances noted lead to the conclusion that death resulted from a sudden failure of the heart's action. The Emperor had taken chloroform four times, and had always passed under its influence satisfactorily, and suffered no inconvenience from its inhalation. It speaks highly for chloroform, and for the care with which its administration was regulated, that this should have been so in a case where there was so large an amount of organic disease, and where the heart subsequently showed itself so prompt to fail."

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### Correspondence.

#### UNHEALTHY RE-VACCINATION.

MESSRS. EDITORS,—Now that, according to the papers, "the decided measures of the Board of Health have stopped the smallpox to such an extent that vaccination is virtually at an end," it may be allowable, without injury to the trade in virus, to quote the following from a late number of the *British Medical Journal*. It shows at least that too great care cannot be taken in selecting the sources of virus of every kind.

"*L'Imparziale* states, on the authority of the *Gazetta della Spezia*, that recently seventeen persons were admitted into hospital, after re-vaccination, with large phlegmonous swellings of the arms at the point where the operation had been performed. In one man, a sailor, sloughing took place, and was followed by death. The cases occurred in persons who were all re-vaccinated on the same day; and none of those operated on on other days were affected. The occurrence is attributed to bad lymph—taken probably from a diseased cow."

SALUS.

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#### THE FEE FOR MEDICAL EXAMINATION FOR LIFE INSURANCE.

MESSRS. EDITORS,—The remarks in your last issue, under the editorial head, are not only entirely just and true, but they also cover the ground so completely, that there is but little else for those specially interested in the matter to do, except heartily to endorse them. In doing this, however, I will take occasion to refer to certain points more particularly.

First, the value of the *time* given by the medical examiner, the portion of the day from which it is taken, and the frequent chances that, during this period, no remuneration whatever accrues to the examiner. Most companies desire but one hour's service at their offices—others require one and a half, or two. To each of these periods it is fair to add from one half to a whole hour, consumed in going to and from the office; so that, on an average, two hours, and those the very best in the day for the practitioner, are thus given to the life office. If, in addition—as so frequently happens—no applicants appear, the loss to the examiner is evident enough. To examiners who are *salariated*, this, of course, is, personally, of far less consequence. If fairly paid, they can better afford to sit idle for an hour or more; but it is a very common thing for them to lose valuable cases while they are thus in attendance at the life office. But those examiners who are *salariated* feel that it is only fair that they, when examining for other offices, should receive a proper fee, both on their own account and on that of their brethren who are not, as

they are, paid whether applicants come in or not. The office for which I examine, has, I am happy to bear witness, shown itself generous and just during the entire term of my service—from 1859 to the present date; and, some time since, volunteered to pay all medical gentlemen who came in to do duty in the absence of their own examiner, *five* dollars.

Secondly: Influenced by these considerations and with this view of the subject, I have several times made efforts to have the general fee raised to the sum last named—regarding that as the least fee that should be offered to a competent physician for the duty demanded. No success has attended these efforts. While it is a well-known fact that the amount mentioned is constantly paid in New York city without hesitation, companies whose headquarters are in that righteous emporium refuse to pay examiners here more than *three* dollars, simply because that has hitherto, for some time, been the fee; and so long as they can get the work done for that sum, they will continue to refuse the application of faithful and long-tried men for an advance. Why is an examination of this sort worth less to a life company in Boston than in New York? The risk is the same—the premium the same—the labor the same—why not the fee? It is within my memory that two dollars, and even *one* dollar, was thought enough for a medical examiner for life insurance! The offer of such fees for such services is an insult to a hard-worked profession—whose members, it is safe to say, do more gratuitous work for the community than any other set of men in it. The fact is, that five dollars for an examination which throws so much responsibility upon the examiner, and which frequently “involves many thousands of dollars,” is the very least that a rich and prosperous life office should offer to a physician whose opinion is confessedly of vital importance to its interests. When the commissions paid to solicitors and agents are compared with the remuneration extended to so important an officer as a trained medical examiner, the “look of the thing” would be ludicrous, were it not monstrous for its injustice.

Lastly: If flourishing and rich corporations in Life Assurance care to have trustworthy and fully qualified medical examiners, they ought to pay them fairly and cheerfully; and not add to the hardness of a refusal to raise the fee to a right standard, the taunting intimation *that plenty of doctors can be found to do the work at the lower rate*. If this latter assertion is true, the sooner medical examiners who look for a proper return for their services *put it to the test*, the better. We leave it for those concerned, *in all quarters*, to decide who will put in the best appearance, and make the most in the end!

Boston, Feb. 7, 1873.

M.

#### VIVISECTION.

MESSRS. EDITORS.—In a closing lecture to a course on anatomy, given by Dr. Physick, of the University of Pennsylvania, more than forty years ago, and I believe it was his last lecture, he urged earnestly on the students that they should “on no account practise vivisection on dumb animals;” for, he said, “it was cruel and inhuman, and the benefit does not justify the suffering inflicted.” “Indeed,” he said, “he had yet to learn that any real benefit had arisen from the practice.” His language and his feelings on the subject were strong, and have probably had a salutary influence on the minds and subsequent practice of those who heard.

After the long interval that has elapsed, distinguished by its amount and variety, and, may it not be said, by its extreme cruelty of vivisection, can it not be now asked with still more intenseness, *has it paid?* Was there not a propriety in the interposition of Mr. Bergh, the apostle of the dumb animals, in calling to account a distinguished physiologist of this country? It is, however, gratifying that in the case alluded to the reply seemed to have been satisfactory. And is it not true that the vivisections on this side the Atlantic have not, in the general, been very numerous or specially fraught with inhumanity?

There have, however, been exceptions. Some years ago a medical professor, residing in one of our Western States, published in a medical journal a

series of experiments performed on the crocodiles in Georgia, so heinous and revolting for cruelty that the writer of this sent a remonstrance, to be published in the same journal, but it was declined.

In the Boston Medical and Surgical Journal of the 23d of January is a brief notice, half apologetic for vivisection, and intended apparently to divert attention to other issues. It is signed H. P. B., and charges the late "loss of millions of money and scores of human lives" to the head of the fire department, who, he says, "in obedience to an exaggerated public sentiment, refrained from risking the lives of a few sick horses." The commissioners appointed to investigate the causes of the fire, report:—"It will not be supposed that the horses were dispensed with from motives of humanity. The horses of the department were not used because they were generally unfit to be used, and would not have gone so fast as the men did." This settles the matter of having gone "to a vicious extreme." To close, let an old man say to H. P. B. that it would be far more noble in him and in others to unite in the benevolent and humane work of saving our dumb animals from unnecessary suffering than of sneering at those who do not seem to bestow a proper amount "of their attention upon the much severer mutilations inflicted by sportsmen."

SENEX.

### Medical Miscellany.

DR. A. M. SUMNER has been appointed a Physician to the Children's Hospital, *vice* Dr. F. B. Greenough resigned.

AN INTERNATIONAL PHARMACOPEIA is in preparation in Europe, designed to secure uniformity in Pharmaceutical preparations.

**SMALLPOX IN BERLIN.**—According to Dr. Guttstadt, in a paper read to the Berlin Medical Society, the number of deaths from smallpox in Berlin for the year 1871 was 6478. At the beginning of the epidemic, there were, at least, 20,000 individuals who had not been vaccinated. Of these, 14 per cent. were seized with variola, while of the vaccinated only 2 per cent., and of the re-vaccinated  $\frac{1}{4}$  per cent. became subjects of the disease. Of the non-vaccinated, 42 per cent. died, of the vaccinated, 16 per cent., and of the re-vaccinated, 15 per cent.—*London Med. Times and Gazette*, Jan. 25th, 1873.

DR. HENRY C. PERKINS died February 1st, at his residence in Newburyport, after an illness of but a few hours' duration. The attack was one of angina pectoris, to which Dr. Perkins had been subject for many years. He was 69 years of age. Graduated from Harvard College in the class of 1823, while in his 19th year, he studied medicine with the elder Dr. Warren, of Boston, and with Dr. R. S. Spofford, of Newburyport, commencing practice in 1827. He rapidly rose in his profession, and at the time of his death was honored by his medical brethren to a high degree for his skill and science. He was a patient student in meteorology, astronomy, chemistry and botany, and was the first person in America to use the portrait-taking process of Daguerre. It is related of him that he learned the German language when sixty-five years of age, for the purpose of translating a work of Hallier on disease germs. He was President of the Massachusetts Medical Society for two successive years, and has occupied many important public positions. He was a member of the American Academy of Arts and Sciences, and of the Committee on the Observatory of Harvard College.

**GALVANO-ACUPUNCTURE FOR AORTIC ANEURISM.** Prof. E. De Renzi reports a case thus treated, and reviews the records of other cases. In his own case the battery used was one of twenty-one elements; the zinc plates four to five centimetres broad, by eight long, immersed about half their length. The index stood at sixty when the circuit was open, at twenty

when it was closed. Six needles were inserted, and each pole was attached for five minutes to each needle, so that the whole operation lasted an hour. On the seventh day the man died of rupture of the sac. An autopsy showed no trace of any clot near the points where the needles had entered, but some evidence of inflammation. The conclusions to which Prof. De Renzi is led, by his review of Ciniselli's cases and others, are—1. That no case is known of a complete and permanent cure of aortic aneurism by galvano-acupuncture; 2. That the cases of apparent cure are more readily explained by the irregular course of the disease, and the effects of quiet and good hygienic influences; 3. That the operation is harmless in itself, but may be the indirect cause of mischief by inducing changes in the walls of the sac, rendering them more liable to burst.—*Nuova Liguria Medica*.

**NATIONAL BUREAU OF HEALTH.**—It is proposed to establish a National Bureau of Sanitary Science, to be located in Washington, and to be a branch of the Department of the Interior. A bill for the purpose is about to be introduced in Congress providing for the appointment of a Commissioner and assistants versed in sanitary science, whose duty it shall be to acquire and diffuse among the people useful information relating to the preservation of the public health, and aid in the establishment of sanitary and quarantine rules. The House Committee on Education and Labor, it is thought, will report favorably on the bill, and it is not improbable that it will pass both houses during the present session.

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#### NOTES AND QUERIES.

**MESSRS. EDITORS.**—The cases of death from vaccination were both cases of re-vaccination. L. H. LUCE.  
Falmouth, Feb. 3, 1873.

**PAMPHLETS RECEIVED.**—Myringectomy, followed by Decided Improvement in the Hearing Power. By J. S. Prout, M.D., of Brooklyn, N. Y. Albany. 1873. Pp. 10.—Sixth Annual Report of the Board of Trustees and Officers of the Minnesota Hospital for the Insane, for the year ending Nov. 30, 1872. St. Paul. 1873. Pp. 42.—Burns and Scalds; their Treatment, with Cases. By J. F. Montgomery, M.D. San Francisco. 1873. Pp. 24.—A Case of Ankylosis of the Hip-joint of fourteen Years' Duration. Successful Operation for the formation of False Joint. By A. G. Beebe, A.M., M.D. Chicago. 1873. Pp. 8.—Transactions of the Medical Society of the State of West Virginia. Wheeling. 1872. Pp. 335 to 432.

**DIED.**—At Rutland, Feb. 3d, B. H. Tripp, M.D.

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#### MORTALITY IN MASSACHUSETTS.—Deaths in fourteen Cities and Towns for the week ending February 1, 1873.

Boston, 166—Charlestown, 21—Worcester, 15—Lowell, 14—Milford, 2—Cambridge, 19—Salem, 6—Springfield, 10—Lynn, 12—Gloucester, 9—Taunton, 8—Newburyport, 4—Somerville, 8—Haverhill, 4. Total, 298.

**Prevalent Diseases.**—Consumption, 57—smallpox, 52—pneumonia, 30—scarlet fever, 9—croup and diphtheria, 7—typhoid fever, 7.

The deaths from smallpox were as follows:—In Boston forty-two, Gloucester four, Lynn two, Charlestown two, Cambridge one and Somerville one.

**GEORGE DERBY, M.D.,**  
Secretary of the State Board of Health.

**DEATHS IN BOSTON** for the week ending Saturday, February 8th, 1873. Males, 76; females, 81. Apoplexy, 4—inflammation of the bowels, 1—bronchitis, 1—inflammation of the brain, 4—congestion of the brain, 1—disease of the brain, 5—cerebro-spinal meningitis, 2—cancer, 1—cyanosis, 1—caries, 1—consumption, 16—convulsions, 5—croup, 2—dyspepsia, 1—debility, 1—dropsy of the brain, 5—drowned, 1—dysentery, 1—diabetes, 1—diphtheria, 1—scarlet fever, 8—typhoid fever, 3—disease of heart, 11—hemorrhage, 1—infantile, 2—disease of the kidneys, 3—laryngitis, 1—disease of the liver, 3—congestion of the lungs, 2—inflammation of the lungs, 11—marasmus, 7—old age, 8—paralysis, 1—pleurisy, 1—peritonitis, 1—puerperal disease, 1—suicide, 1—syphilis, 1—smallpox, 24—teething, 3—whooping cough, 2—unknown, 3.

Under 5 years of age, 56—between 5 and 20 years, 15—between 20 and 40 years, 41—between 40 and 60 years, 21—over 60 years, 24. Born in the United States, 103—Ireland, 36—other places, 18.